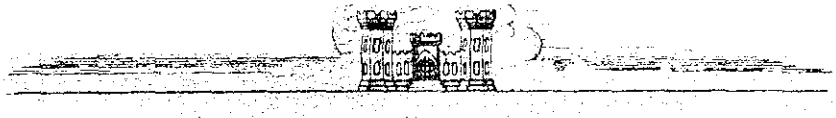
FRENCHBORO HARBOR

LONG ISLAND PLANTATION

MAINE

SURVEY

(REVIEW OF REPORTS)



DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
WALTHAM, MASS.

SEPTEMBER 1968

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE
John W. McCormack Post Office and Courthouse
BOSTON, MASSACHUSETTS 02109

NOV 2 1 1973

Division Engineer
New England Division
U. S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02154

Dear Sir:

This is our updated post-authorization report on the navigation improvement project for Frenchboro Harbor (Hancock County), Maine, as requested by Mr. Leslie's letter of August 7, 1973. The project was authorized for construction in December 1970. This report was prepared under authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.). It has the concurrence of the Maine Department of Marine Resources as indicated by their November 13, 1973 response (copy attached for your information). It is also being coordinated with the National Marine Fisheries Service whose comments will be forwarded upon receipt.

We understand that the plan of improvement will consist of a 5-acre anchorage 10 feet deep at mean low water, in the outer harbor and a channel 75 feet wide and 6 feet deep from the outer harbor into a 1.5 acre anchorage and turning basin, also six feet deep.

Frenchboro Harbor, located on the northwest portion of Long Island, is a narrow cove bounded mostly by ledges. The inner portion of the harbor is shoal offering very limited anchorage. At low water, the harbor is almost non-existent. To avoid running aground, boats must anchor outside the harbor proper in an area exposed to wind and waves.

Frenchboro Harbor is an active commercial fishing port. At present, there are four major types of fishing being carried on: lobstering, herring seining, long-line fishing for hake, and scallop dragging. The shallow water conditions create major navigation problems in the harbor.

Landing the lobster catch during low water periods is a major problem. This coupled with dangerous docking conditions during foul weather, accounts for much of the lobster harvest being diverted to other ports. Lobstermen report that they have had frequent losses of traps that could not be brought into the harbor for protection during stormy weather. Many boats have suffered extensive damages to hull and gear during foul weather because of overcrowding in this anchorage. Lobster-holding cars are also subjected to damage or loss during stormy weather.

With the arrival of as many as 17 mainland herring carrier vessels, overcrowding in the harbor reaches the critical point and adds to the difficulties of handling the transfer of fish. Tidal delays are inherent at this harbor, thus limiting the available time the herring fishermen have to make their catches. As many as ten seiners, operating a total of 36 boats of various sizes, operate in the area during the peak of the fishing season. The estimated average annual herring catch under without-the-project conditions in the Frenchboro Harbor area over the 50-year period of analysis is four million pounds.

An important fishery for hake takes place in the vicinity of Frenchboro. The fish are taken by long line during a period of about four months each year. About seven vessels operate out of Frenchboro Harbor and land their catch at mainland ports. As is the case with the herring fishery, navigation problems associated with low-water conditions and tidal delays also limit the catches of hake. Hake catches under without-the-project conditions will average about two and a half million pounds annually.

A total of 22 lobster boats are based at this harbor. The latest figures on lobster landings indicate that about 8,000 pounds of lobsters per boat or a total of about 180,000 pounds valued at $262,800 are caught by lobster boats based at Frenchboro Harbor. Of this total, however, about 140,000 pounds are landed at Frenchboro. The remaining 40,000 pounds are landed elsewhere, primarily at McKinley, on the mainland, due to the present lack of facilities and unprotected conditions existing at Frenchboro Harbor. The average annual lobster catch is expected to remain at about the same level over the period of analysis, that is, 180,000 pounds.

With improvement of the harbor, it is expected that the 40,000 pounds of lobster now landed elsewhere will be brought into Frenchboro Harbor. Additional mooring space within a protected anchorage will permit four lobstermen, not now fishing out of Frenchboro, to return, thus adding their average catch of about 32,000 pounds to the total of local landings.

It is expected that with elimination of tidal delays and improved navigation conditions, the lobster landings will increase by ten percent, representing 21,200 pounds, at $1.46 per pound, valued at $31,000. This increase of $31,000 represents the average annual project benefit accruing to the lobster industry.

SYLLABUS

The Division Engineer finds that a Federal navigation project at Frenchboro Harbor is warranted to provide a 5.0 acre anchorage 10 feet deep in the outer harbor and an entrance channel 75 feet wide, 6 feet deep extending from the outer harbor into a 1.5 acre, 6-foot deep anchorage and turning basin in the inner harbor. The estimated first cost of construction is $560,000 exclusive of $22,000 for pre-authorization studies. The an nual maintenance cost is estimated to be $5,200. Based on general benefits for reduction of storm damages and elimination of tidal delays thus resulting in an increased fish catch, the benefit-cost ratio is 2.0 to 1.0. Local interests should be required to provide a public landing open to all on equal terms, local access channels and berthing areas serving other wharves adjacent to the proposed anchorage commensurate with the depths provided in the related project areas and suitable spoil disposal areas that may be necessary for initial construction and subsequent maintenance. Officials of Long Island Plantation have indicated that the Plantation is able and willing to meet the requirements of local cooperation.

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DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM, MASSACHUSETTS 02154

IN REPLY REFER TO:

NEDED-R

27 September 1968

SUBJECT: Survey (Review of Reports) on Frenchboro Harbor, Maine.

TO: Chief of Engineers
ATTN: ENGCW-PD

AUTHORITY

1. This report is submitted in compliance with a resolution adopted 17 January 1963, by the Committee on Public Works of the Senate of the United States. The resolution reads as follows:

"Resolved by the Committee on Public Works of the United States Senate, that the Board of Engineers for Rivers and Harbors, created under Section 3 of the River and Harbor Act, approved June 13, 1902, be, and is hereby, requested to review the report of the Chief of Engineers on Frenchboro Harbor, Maine, transmitted to Congress on April 2, 1937, with a view to determining whether the recommendations contained therein should be modified in any way at the present time in the interest of improvement of navigation conditions." The Chief of Engineers, by a letter dated 24 January 1963 assigned a survey report to the Division Engineer, New England Division.

PURPOSE AND EXTENT OF STUDY

2. This study was made to determine the need and economic justification for a Federal navigation improvement at Frenchboro Harbor, Maine. A detailed hydrographic survey consisting of soundings and probings was made to determine the extent and character of material to be dredged. In view of the presence of rock in the study area additional probings were taken in August to supplement previous data and to serve as a firm basis for development of a plan of improvement. Local, State and other Federal agencies were consulted during the study and their views are included in this report.

DESCRIPTION

3. Frenchboro Harbor, also known as Lunt Harbor, is located on the northwest side of Long Island, the most southerly island of a large group of islands in Jericho Bay. LongIsland lies 7 miles south of Mount Desert Island, 2 miles southeast of Swan's Island, and 100 miles by water northeast of Portland, Maine. The island, roughly circular in shape, can be inscribed in a circle with a mile and a half radius. The harbor is formed by a natural indentation surrounded by granite ledge along the northern shoreline of the island providing a natural anchorage approximately 2400 feet long and 500 feet wide at its widest point.

4. Depths in Frenchboro Harbor range from 17 feet below mean low water to 5 feet above mean low water. At low water, the inner harbor is largely exposed, while the depths in the outer harbor drop off sharply from an average 3-foot depth at the outer wharves. The mean tide range is 10.2 feet with a spring tide range of 11.7 feet. Except for infrequent periods when the wind is north-northeast, the outer harbor serves as an anchorage for the local fishing fleet.

5. The locality is shown on U. S. Coast and Geodetic Survey Charts Nos. 308 and 1202, and on U. S. Geological Quadrangle entitled Swans Island, Maine, and on the maps accompanying this report.

TRIBUTARY AREA

6. Frenchboro has 25 inhabited homes and is the only settlement on the island. The island families keep cars on the mainland, and many of them have houses there, where they stay overnight when on a shopping or visiting trip. In 1900 the population of the settlement was 174. In 1932 it was down to 117. The present population varies from 40 to 56 persons. Lobstering, herring seining, and long-line hake fishing provide the only means of earning a living on the island. Twenty-two boats are owned and locally based, while many transients from the mainland use the harbor as a stopping off point to and from the fishing grounds.

7. The chief reason for the reduction in population of this isolated island over the years has been a lack of adequate schooling and other social benefits which are enjoyed by mainland residents. The town has no doctor, lawyer, resident clergyman, bar, restaurant, store, bowling alley, movie theatre or jail. Despite the advantages that

off-islanders have, there is no poverty among the residents severe enough to warrant public assistance. The lobstermen are able to support their families and every able-bodied man on the island is engaged in fishing. However, the lack of social advantages enjoyed on the mainland has caused the younger residents to leave the island. By 1964, only two children of one family remained in the one-room schoolhouse. In order to save the dying community, and stem this outward migration, the State of Maine social workers and town residents got together and developed a plan to formally license five island families as foster parents for State wards. This plan has proved to be successful; in fact, the State is looking for other island communities to adopt similar plans. The elementary school now has all the children it can educate. The foster children seem certain to stay on the island until they are old enough to leave for boarding school, returning to the island for vacations. Local residents feel that with an improved harbor they will be able to entice mainland fishing enterprises to locate a processing plant on the island with the expectation that several foster children would find future employment in the fishing industry.

8. Ferry service from the mainland is available during the summer months. Schedules for the ferry are dependent upon the tides. Home heating fuel and gasoline are supplied by a small coastal tanker which makes regularly scheduled trips among the offshore islands.

BRIDGES AFFECTING NAVIGATION

9. There are no bridges crossing the harbor.

PRIOR REPORTS

10. Frenchboro Harbor was the subject of a previous Federal study completed in 1936 to determine the need and justification for constructing a breakwater off the eastern shore of the harbor. An unpublished report, dated 12 May 1936, indicated that this improvement was not justified at the time because of its excessive cost ($210,000). No other studies have been made of this harbor. There is no existing Corps of Engineers' project at Frenchboro Harbor.

OTHER IMPROVEMENTS

11. No improvements for general navigation, other than construction of fishing wharves by local interests and a State-owned ferry pier located near the entrance on the east bank, have been made in Frenchboro Harbor. Plans were recently developed by the State of Maine to repair and improve the ferry terminal but the appropriation was insufficient to complete the work desired. Therefore, no effort has been made to start the work.

TERMINAL AND TRANSFER FACILITIES

12. There are 18 wharves in the inner harbor and 3 in the outer harbor. All of these, with the sole exception of the ferry wharf, are owned by the local fishermen. The berthing areas of all wharves in the inner harbor are exposed at mean low water. The ferry terminal is also used by a mail boat serving the island. The small oil tanker which delivers fuel to the island discharges supplies at the long wharf at the head of the outer harbor.

IMPROVEMENT DESIRED

13. A public hearing was held in the Town of Tremont, Maine on 7 June 1966 to determine the nature and extent of improvements desired by local interests. The hearing was attended by about 35 people including representatives of the State and local governments, fishing industry, business interests and other residents of Frenchboro.

14. Local interests desire dredging to enlarge and deepen the existing natural anchorages in the harbor. A general plan which met with the concurrence of those attending, was submitted by a spokesman for local interests. The plan would provide for dredging the outer harbor to a depth of 10 feet below mean low water and dredging the inner harbor to 8 feet. Most of the fishing boats are either crowded together in deep water at the entrance and exposed to storm damage or grounded out in the inner harbor during low tide. Local fishermen claim the desired improvement would eliminate most storm damage and tidal delays resulting in increased fish catch.

EXISTING AND PROSPECTIVE COMMERCE

15. Lobster, herring and hake fishing are the principal commercial activities in Frenchboro Harbor. Twenty-two lobster boats are based in the harbor. The owners catch an average of 180, 000 pounds annually, of which it is estimated that 140, 000 pounds are landed at Frenchboro and 40, 000 pounds are landed on the mainland. Local interests claim that the navigation improvements will allow a greater portion of the catch to be landed at Frenchboro allowing the fishermen more time at the fishing grounds because of the reduction of time spent in transit. With improvement, the additional mooring space within the anchorage will permit four lobstermen to return to Frenchboro Harbor, adding their average annual catch of 32, 000 pounds to the total of local landings. At the time of the Federal breakwater study in 1936, there were 34 lobster boats operating out of Frenchboro, making an annual catch of 125 tons, worth about $60, 000, compared to a catch of 90 tons annually valued at $144, 000 for 22 lobster boats presently based in the harbor.

16. The herring-sardine industry provides the island with its most important cash fishery. The estimated average annual herring catch in the Frenchboro area is 4, 000, 000 pounds. There are three seine operators in the harbor who convert from lobstering during the herring fishing season. Each seine operator utilizes a lobster boat plus 2 to 4 skiffs carrying the seine nets. Two of the three seiners operate more or less independently. The third heads up the biggest "cooperative-herring-combine-operation" on the coast.

17. In this operation, the Frenchboro seine boat operator watches the two or three largest seining holes near Long Island for herring running in schools. When he estimates that a strike of 40, 000 bushels or more is possible, he calls, by radio or telephone, 5 to 15 other seiners from surrounding islands and mainland ports. The number of boats that respond will depend on the exact location, number, and concentration of the school. These seiners will bring from 20 to 40 net sections loaded in skiffs. The nets are laid around the entire school of herring which are then trapped in 3 to 4 acres of water. The sardine factories send out carriers to pump out the fish. A single strike has resulted in as much as 70, 000 bushels of herring.

18. Seven of the 22 lobster boats convert to hake fishing in the summer months. The fish are now landed at mainland ports. These may be landed at Frenchboro with the improved harbor if present plans for a processing plant are realized. The present catch is about 2, 500, 000 pounds each year.

VESSEL TRAFFIC

19. During the herring fishing season in local waters as many as 17 mainland carriers crowd into the harbor, adding to the difficulties of local fishermen. Many hake and herring boats use Frenchboro Harbor to make minor repairs to equipment and obtain supplies of water and fuel.

20. The State of Maine ferry boat is 90 feet long and carries 8 cars and 125 passengers. In the summer, the ferry can make a scheduled landing twice each week without trouble, although the situation is reported as "tight" due to shallow depths at low tide. During the remainder of the year, a regular schedule cannot be maintained and the ferry comes when it can on the tide. State Port Authority officials have stated that with dredging 3 stops per week would be made.

21. A 76-foot lobster vessel drawing 7. 5 feet of water and an 81-foot coastal tanker drawing 10. 5 feet make unscheduled calls at Frenchboro, depending upon the tide.

DIFFICULTIES ATTENDING NAVIGATION

22. The entire harbor is used as an anchorage area by the local lobster fishing fleet. The harbor has filled in considerably during recent years so that most of the inner harbor is exposed at low water. Even the outer harbor and the channel to the ferry landing are shallow. To avoid grounding out, boats must be moored outside the harbor proper in an area exposed to wind and wave action. Because of tidal delays, lobster traps which are set in exposed waters around the island cannot be brought into the harbor for safety prior to major storms. This has resulted in substantial losses of lobster traps on various occasions. Caught between the choice of mooring in the exposed outer harbor or in the dry (at low tide) inner harbor, most islanders try to cluster their moorings in a narrow area near the ferry landing. As can be expected these boats suffer periodic damage from bumping together. Lobster storage cars moored, due to lack of space,

outside the entrance have been subjected to considerable damage. One lobster dealer, who had placed his storage car inside the entrance, reported that he lost approximately $1,000 worth of lobsters when a coastal tanker ran-aground in the harbor and churned up so much mud that the lobsters were smothered.

23. The ferry, lobster vessel or smack, and tanker have had considerable difficulties because of the unprotected nature of the harbor and the tidal delays. At the public hearing the captain of the lobster smack reported that he brings bait to the fishermen at least once a week and on occasion has found it necessary to layover at Swan Island overnight because he was unable to reach the unloading site on the tide. The captain of the coastal tanker reported that he could only stop at the island with fuel supplies on his return trip to Rockland from Cutler when the tanker is nearly empty, provided the tide was right. Otherwise, he too has to seek overnight shelter at Swan Island and return to Frenchboro the next day at high water.

WATER POWER AND OTHER SPECIAL SUBJECTS

24. There are no problems pertaining to water power, flood control, pollution or related subjects. The improvement contemplated would have no adverse effect on fish and wildlife resources. In fact, the U. S. Fish and Wildlife Service considers that dredging of the harbor will attract herring into the seining hole at the entrance to Frenchboro Harbor.

PROJECT FORMULATION

25. Consideration was given to the plan of improvement proposed by local interests. A detailed hydrographic survey and probings taken in Frenchboro harbor in preparation of this report indicate a large amount of ledge rock would be encountered in developing the desired improvement to a depth of 8 feet in the inner harbor. Dredging of either the outer or inner harbors alone would not provide sufficient space to accommodate all of the craft presently using the harbor. Because of the long and narrow configuration of Frenchboro Harbor, development of a satisfactory anchorage in the inner harbor is difficult to attain. Most of the landings are strung out along both banks, leaving only a narrow fairway clear of ledges at the ends of the piers, particularly in the upper half of the inner harbor. As a result, any anchorage or turning basin in the inner harbor would, of necessity, be limited to the 1.5 acre behind the large ledge outcrop in the center of the harbor. This ledge would serve as a natural barrier to wave action from the outer harbor.

26. In order to evaluate all possible alternatives for improvement of the harbor, consideration was given to construction of a rubble mound breakwater extending 600 feet at right angles from the easterly shore of the outer harbor, as proposed in the report of 1936. The structure would provide adequate anchorage sheltered from all storms for the locally-based craft. At present price levels, the structure would cost about $600,000. However, it would not solve the problem of overcrowding in the outer harbor during the herring fishing season, nor would it eliminate the tidal delays experienced by the lobster fishermen in tending their traps. The same reasons for lack of justification of the breakwater in 1936 apply today. At that time, the District Engineer found that vessels of 12 feet or less of draft, following the coast, generally use the thoroughfares and passages inside and between the islands along the shore, and thus have a fairly protected route. Long Island is about 6 miles seaward of this route, which, in this locality, lies through Casco Passage just northward of Swan's Island and along which route are good anchorages close at hand in case of fog or storm.

27. Small vessels taking the outside route, if caught by a storm, could find shelter leeward of Long Island or in Burnt Coat Harbor, which is a protected anchorage on the south side of Swan Island, 4 miles from Frenchboro Harbor. There is no urgent need of a harbor of refuge by instances of loss of lives or vessels wrecked. Lobster fishermen, who have indicated that they would transfer to the harbor following dredging to provide access to shore facilities, would not return on the basis of breakwater protection alone. Local interests have stated that their needs are for more anchorage space by dredging rather than breakwater protection. They believe that dredging of the harbor to its maximum extent would provide sufficient room for the larger boats to anchor in the outer harbor and smaller craft could then move into the naturally-protected area of the inner harbor. This opinion is based on the premise that these larger vessels, with plenty of sea room, could ride out a northeast storm in an uncrowded anchorage. Thus, anchorage improvement would surpass the need for any breakwater protection.

28. The area available for improvement is limited by ledge outcrops and the narrow configuration of the harbor. The maximum area and optimum depth considered to be needed and justified, based on an analysis of the number and size of vessels expected to use the harbor, would provide a 5.0-acre anchorage, 10 feet deep, in the outer harbor and a channel 75 feet wide, 6 feet deep, leading into a 1.5-acre anchorage 6 feet deep in the inner harbor. Further enlargement of the channel or anchorages would involve expensive rock removal and would not be economically justified under present conditions. Fishing boats that use the inner harbor draw a maximum of 4 feet of water. The deeper draft herring carriers, ferry and coastal oil tanker use the outer harbor where a 10-foot depth would be provided. Although eighty percent of the lobster fishing fleet draw less than 5 feet, they would have to be moored in the outer harbor where most of the anchorage area is available. A depth of 10 feet is considered necessary in lieu of a normally prescribed depth of 8 feet because of the ground swells which sometimes reflect into the outer harbor, causing a substantial rise and fall of the vessels. Also, during the herring season several carriers drawing 7 to 8 feet anchor among the local craft. The added depth will also help in setting seines in the harbor during herring runs.

29. The foregoing project formulation, with due consideration of cost and benefit variables, results in a project which maximizes net benefits.

PLAN OF IMPROVEMENT

30. The most practical and optimum plan of navigation improvement for Frenchboro Harbor would provide for a 5-acre anchorage 10 feet deep in the outer harbor and a channel 75 feet wide, 6 feet deep, leading to a 1.5-acre anchorage 6 feet deep in the inner harbor. Local interests have indicated that the plan would meet their needs. It would eliminate congestion and tidal delays, increase fish landings, reduce boat damages, add to the natural protection offered by the harbor from storms and provide the opportunity for immediate expansion of the fishing fleet.

SHORELINE CHANGES

31. The proposed dredging in Frenchboro Harbor would have no adverse effect on the shoreline as the entire harbor is surrounded by ledge.

REQUIRED AIDS TO NAVIGATION

32. The Commander, First Coast Guard District, has been consulted and advised that no additional aids to navigation would be required in the harbor as a result of the proposed improvement (Appendix B).

ESTIMATE OF FIRST COSTS

33. An estimate of the first cost of construction of the proposed plan of improvement has been made. The estimate is based on soundings and probings taken by hydrographic survey in September 1967. Additional probings were taken in August 1968 to determine more specifically the location of ledge in the proposed project area. Federal construction under the proposed plan would involve the removal of mud, sand, gravel and ledge rock by bucket dredging with scow disposal in an approved offshore dumping ground. Local interests would be responsible for the construction of an adequate public landing adjacent to the 10-foot anchorage.

34. Dredging quantities are based on in place measurements and provide for removal of material to a depth of 6 feet below mean low water in the inner anchorage and channel and 10 feet in the outer anchorage plus an allowance of one foot overdepth with side slopes of one vertical to three horizontal. Two feet of overdepth is taken where ledge is encountered. Unit prices used for dredging costs are based on those prevailing in June 1968 for similar work. The estimate of first cost, including an allowance for contingencies is as follows:

PROJECT COST ESTIMATE

ITEM	
6 and 10 ft. anchorages and channel:	
Dredging ordinary material 100,000 c.y. @$3.25	$ 325,000
Rock removal, 2,000 c.y. @$50	100,000
Contingencies 20%	64,000
	$ 489,000
Engineering & Design	30,000*
Supervision and Administration	41,000
Total Construction Cost	$ 560,000
Public landing access channels and berthing areas	$ 5,000
Total Project Cost (Federal and non-Federal)	$ 565,000

*Excludes project study cost of $22,000

ESTIMATE OF ANNUAL CHARGES

35. Annual charges for the navigation improvement have been computed on the basis of a 50-year project life with a Federal interest rate of 3-1/4 percent. Maintenance costs are based on an average annual shoaling rate of 1,500 cubic yards as the watershed surrounding the harbor is small and the offshore bottom is relatively hard material. The access channel and berth improvements and public landing are considered to be self-liquidating through user fees and are not included in the estimate of annual charges.

ANNUAL CHARGES

Interest and Amortization ($560,000 x .04073)	$22,800
Maintenance Dredging (1,500 c. y. @ $3.50)	5,200
	$ 28,000

ESTIMATE OF BENEFITS

36. The plan of improvement would provide the maximum open anchorage area possible within the harbor without costly removal of ledge outcrops. With sufficient allowance for tidal range and wave action, the proposed improvement would provide space for approximately 35 lobster boats.

37. Due to shallow depths, landing the lobster catch during low tide is a major problem. To avoid running aground, the boats must be moored in a congested group in the outer harbor. These conditions have caused fishermen great inconvenience over the years, resulting in lost fishing time, reduced catches, extensive damage to both boats and gear and has limited the normal growth and development of the harbor.

38. Local lobstermen report that each of the 22 boats using the harbor year round has suffered periodic damage averaging between $300 and $400 each year. This damage is caused by grounding out or pounding on the bottom or smashing into other boats. Lobster holding cars and dories containing seining nets have suffered similar damage. In a recent storm, three dories and a 12-bay lobster car were destroyed and several other dories upset at a reported loss of $5,000. As many as ten seiners, operating a total of 36 boats of various sizes, operate

in the area during the peak of the fishing season. This large fleet causes serious congestion in the outer harbor. A critical situation arises when from 5 to 17 herring carriers arrive to pick up fish for delivery to the mainland canneries. Because the vessels must anchor outside in unprotected waters at close quarters with the other boats they too suffer damage, estimated at $1, 000 annually. If dredging were accomplished, the transferred lobster boats and the fin fishing fleet would still leave a somewhat crowded harbor at the height of the fishing season. However, it is expected that damages would be reduced by at least 50 percent, which would represent a saving of $7, 000 per year.

39. It has been reported that because of tidal delays fishermen frequently cannot bring in traps which are set in exposed areas around the island prior to severe storms. This has resulted in losses amounting to an average of 25 traps per fisherman representing an annual loss of at least $5, 000.

40. The total value of the lobster boat fleet at Frenchboro is presently estimated at $154, 000. The owners produce an average annual catch of about 8, 000 pounds per boat for a total of 180, 000 pounds. Of this total approximately 140, 000 pounds are landed at Frenchboro. The remaining 40, 000 pounds are delivered elsewhere, primarily at McKinley on the mainland due to a lack of facilities and shallow depths at Frenchboro. The U. S. Fish and Wildlife Service expects that the 40, 000 pounds of lobsters now landed elsewhere will be brought into Frenchboro upon improvement of the harbor. This is not evaluated as a benefit since the price received for the lobsters would be the same at either location and only a small savings in transportation would be realized.

41. Upon improvement, the additional mooring space would induce four lobstermen to return to Frenchboro Harbor, adding their average catch of 32, 000 pounds to the local market. The United States Fish and Wildlife Service has stated that by elimination of tidal delays and improved navigation conditions, the lobster landings will increase by 10 percent, representing 21, 200 pounds. The average price of lobsters sold at dockside in the area is 80 cents per pound. Thus the additional catch would be valued at $17, 000. With additional operating costs of 60 percent of the value of the catch, the net benefit would be $6, 800.

42. The annual herring catch in the area would be increased by harbor improvement because it would allow better attendance of seines on a regular basis. Thousands of bushels of herring are lost each season because stop seines set in the large coves around the island cannot be tended properly. Schools of herring also enter Frenchboro Harbor.

At present, it is necessary to set seines through the center of the mooring area, a practice which is clearly inconvenient for the operators of the moored vessels and the seiners. It would be possible to catch more fish in the harbor itself after the outer anchorage has been dredged. The increased annual herring catch that would be landed in Frenchboro is estimated to amount to 250,000 pounds valued at $5,000.

43. The hake fishing industry would also benefit on the basis of eliminating tidal delays and improved navigation allowing approximately 30 additional fishing days per year during the hake season. Local fishermen estimate that the present conditions result in a loss of 25 percent in fishing time, which amounts to an estimated 4,000 pounds of fish per boat per fishing day. Since there are usually seven boats engaged in the business, approximately 840,000 additional pounds of hake could be landed. The projected value of hake as reported by the U. S. Fish and Wildlife Service is 0.10 cents per pound, resulting in an average annual value of $84,000. With an operating cost of 60 percent of the value of the catch, the net benefit would amount to $33,600 annually. No benefits have been taken for the potential processing plant.

44. Use of the harbor by pleasure craft, except as a harbor of refuge, is doubtful considering the limited facilities and attractions offered. No benefits have been evaluated.

45. A summary of estimated annual benefits from the proposed project is as follows:

SUMMARY OF BENEFITS

Reduced boat damages	$ 7,000
Reduced loss of lobster traps	5,000
Increased lobster catch	6,800
Increased herring catch	5,000
Increased hake catch	33,600
Total	$ 57,400

COMPARISON OF BENEFITS AND COST

46. A comparison of the estimated annual benefits of $57,400 and the estimated annual charges of $28,000 results in a benefit-cost ratio of 2.0 to 1.

PROPOSED LOCAL COOPERATION

47. The benefits that will result from harbor improvement are general in nature; therefore, the first cost of construction of the proposed project should be borne by the Federal Government. To permit full use of the Federal improvement local interests should be required to construct and maintain a public landing without cost to the United States. The landing, as well as all other private landings benefiting from the improvement, should have berths and access channels having depths commensurate with the project depths. Also, local interests should be required to remove a sufficient portion of the privately-owned pier, shown on Plates 1 and 2 of this report as extending into the proposed 6-foot anchorage, to assure that the structure will not constitute an obstruction to initial construction, subsequent maintenance, and utilization of the anchorage. The costs for these features should be borne by local interests. The public landing should include an access road, parking areas and suitable supply facilities, open to all on equal terms. Local authorities would be required to hold and save the United States free from damages which may result from the construction and subsequent maintenance of the project. Local interests should also be required to provide, without cost to the United States, all lands, easements and rights-of-way required for construction and subsequent maintenance of the project, and regulate the use, growth and development of the harbor facilities with the understanding that they will be open to all on equal terms.

COORDINATION WITH OTHER AGENCIES

48. All Federal, State and local agencies having an interest in the Frenchboro Harbor study were notified of the public hearing held in the Town of Tremont on 7 June 1966. All interested agencies have been consulted during the study concerning the effects of the proposed improvement on their activities. Comments of the U. S. Fish and Wildlife Service are contained in Appendix A. Comments of the U. S. Coast Guard on aids to navigation are included in Appendix B. Comments of State and local authorities are contained in Appendix C.

DISCUSSION

49. The Village of Frenchboro depends entirely upon the fishing industry for its existence. This study has indicated that the island is definitely in need of improved harbor facilities to assure its future as a fishing center in eastern Maine. At low water the harbor practically ceases to exist. To avoid grounding out in the inner harbor, boats must be moored in the deeper outer harbor area which is exposed to ocean waves. Of the 21 wharves located within the entire harbor, only 3 have any water depth at their berths at low tide. These three wharves, located in the

At present, it is necessary to set seines through the center of the mooring area, a practice which is clearly inconvenient for the operators of the moored vessels and the seiners. It would be possible to catch more fish in the harbor itself after the outer anchorage has been dredged. The increased annual herring catch that would be landed in Frenchboro is estimated to amount to 250, 000 pounds valued at $5, 000.

43. The hake fishing industry would also benefit on the basis of eliminating tidal delays and improved navigation allowing approximately 30 additional fishing days per year during the hake season. Local fishermen estimate that the present conditions result in a loss of 25 percent in fishing time, which amounts to an estimated 4, 000 pounds of fish per boat per fishing day. Since there are usually seven boats engaged in the business, approximately 840, 000 additional pounds of hake could be landed. The projected value of hake as reported by the U. S. Fish and Wildlife Service is 0. 10 cents per pound, resulting in an average annual value of $84, 000. With an operating cost of 60 percent of the value of the catch, the net benefit would amount to $33, 600 annually. No benefits have been taken for the potential processing plant.

44. Use of the harbor by pleasure craft, except as a harbor of refuge, is doubtful considering the limited facilities and attractions offered. No benefits have been evaluated.

45. A summary of estimated annual benefits from the proposed project is as follows:

SUMMARY OF BENEFITS

Reduced boat damages	$ 7, 000
Reduced loss of lobster traps	5, 000
Increased lobster catch	6, 800
Increased herring catch	5, 000
Increased hake catch	33, 600
Total	$ 57, 400

COMPARISON OF BENEFITS AND COST

46. A comparison of the estimated annual benefits of $57, 400 and the estimated annual charges of $28, 000 results in a benefit-cost ratio of 2. 0 to 1.

PROPOSED LOCAL COOPERATION

47. The benefits that will result from harbor improvement are general in nature; therefore, the first cost of construction of the proposed project should be borne by the Federal Government. To permit full use of the Federal improvement local interests should be required to construct and maintain a public landing without cost to the United States. The landing, as well as all other private landings benefiting from the improvement, should have berths and access channels having depths commensurate with the project depths. Also, local interests should be required to remove a sufficient portion of the privately-owned pier, shown on Plates 1 and 2 of this report as extending into the proposed 6-foot anchorage, to assure that the structure will not constitute an obstruction to initial construction, subsequent maintenance, and utilization of the anchorage. The costs for these features should be borne by local interests. The public landing should include an access road, parking areas and suitable supply facilities, open to all on equal terms. Local authorities would be required to hold and save the United States free from damages which may result from the construction and subsequent maintenance of the project. Local interests should also be required to provide, without cost to the United States, all lands, easements and rights-of-way required for construction and subsequent maintenance of the project, and regulate the use, growth and development of the harbor facilities with the understanding that they will be open to all on equal terms.

COORDINATION WITH OTHER AGENCIES

48. All Federal, State and local agencies having an interest in the Frenchboro Harbor study were notified of the public hearing held in the Town of Tremont on 7 June 1966. All interested agencies have been consulted during the study concerning the effects of the proposed improvement on their activities. Comments of the U. S. Fish and Wildlife Service are contained in Appendix A. Comments of the U. S. Coast Guard on aids to navigation are included in Appendix B. Comments of State and local authorities are contained in Appendix C.

DISCUSSION

49. The Village of Frenchboro depends entirely upon the fishing industry for its existence. This study has indicated that the island is definitely in need of improved harbor facilities to assure its future as a fishing center in eastern Maine. At low water the harbor practically ceases to exist. To avoid grounding out in the inner harbor, boats must be moored in the deeper outer harbor area which is exposed to ocean waves. Of the 21 wharves located within the entire harbor, only 3 have any water depth at their berths at low tide. These three wharves, located in the

outer harbor, have limited use since they are dangerous to approach in stormy weather. In 1936 a Federal survey was made to determine the feasibility of constructing a breakwater in the outer harbor in order to provide some protection for the fishing fleet. It was found that a breakwater could not be economically justified. Local interests and State officials are of the opinion that Federal improvement of the harbor would definitely entice a packing plant to locate here, taking advantage of the local labor market. They base their argument on the increased employment in the industry which has occurred at Vinalhaven Island since the completion of the Federal navigation project in Vinalhaven Harbor. Since this plant is not assured no benefits have been evaluated.

51. Only an occasional transient recreational craft visits the harbor as there are no recreational facilities on the island. It does not appear that improvement would have any direct and significant influence on inducing these craft to visit the island unless camp sites or other attractions are provided.

CONCLUSION

52. The Division Engineer concludes that the proposed plan of improvement to dredge a 5.0 acre anchorage, 10 feet deep, in the outer harbor and an entrance channel 75 feet wide, 6 feet deep from the outer harbor into a 1.5 acre, 6-foot deep, anchorage and turning basin in the inner harbor will provide adequate mooring space for the lobster fishing fleet and improved access for visiting offshore fishing vessels. Dredging the inner harbor to a depth greater than 6 feet would not be economically justified because of the amount of ledge rock which would have to be removed. The proposed plan provides the maximum area available for anchorage within the natural confines of the harbor. Local interests have concurred that the recommended plan would provide them with the maximum possible commercial use of the harbor thus assuring a future economic expansion opportunity for the island's only industry.

RECOMMENDATIONS

53. The Division Engineer recommends that a Federal navigation project at Frenchboro Harbor, Long Island Plantation, Maine be authorized to provide an anchorage area of 5.0 acres, 10 feet deep in the outer harbor and an entrance channel 75 feet wide, 6 feet deep leading into a 1.5 acre anchorage basin, 6 feet deep, within the inner harbor. The total Federal project cost is estimated at $560,000.

Annual maintenance costs are estimated at $5, 200. This recommendation is made subject to the conditions that local interests:

a. Provide, maintain and operate a public landing with berthing depths alongside commensurate to the anchorage depth and an access road to the landing, including parking facilities, open to all on equal terms.

b. Provide and maintain, without cost to the United States, depths in berthing areas and local access channels serving other wharves adjacent to the proposed anchorage commensurate with the depths provided in the related project areas.

c. Remove without cost to the United States a sufficient portion of the privately-owned pier extending into the proposed 6-foot anchorage.

d. Hold and save the United States free from all damages which may result from the construction and subsequent maintenance of the project.

e. Provide without cost to the United States all lands, easements and rights-of-way required for construction and subsequent maintenance of the project and for aids to navigation.

f. Regulate the use, growth and free development of the harbor facilities with the understanding that they will be open to all on equal terms.

g. Establish regulations prohibiting discharge of untreated sewage, garbage and other pollutants in the waters of the harbor by users thereof, which regulations shall be in accordance with applicable laws or regulations of Federal, State and local authorities responsible for pollution prevention and control.

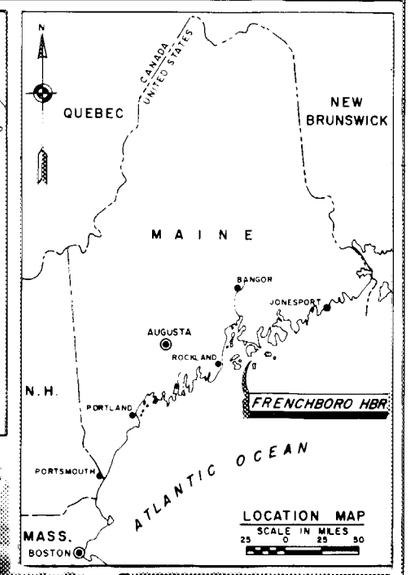
F. R. DAY
Colonel, Corps of Engineers
Acting Division Engineer

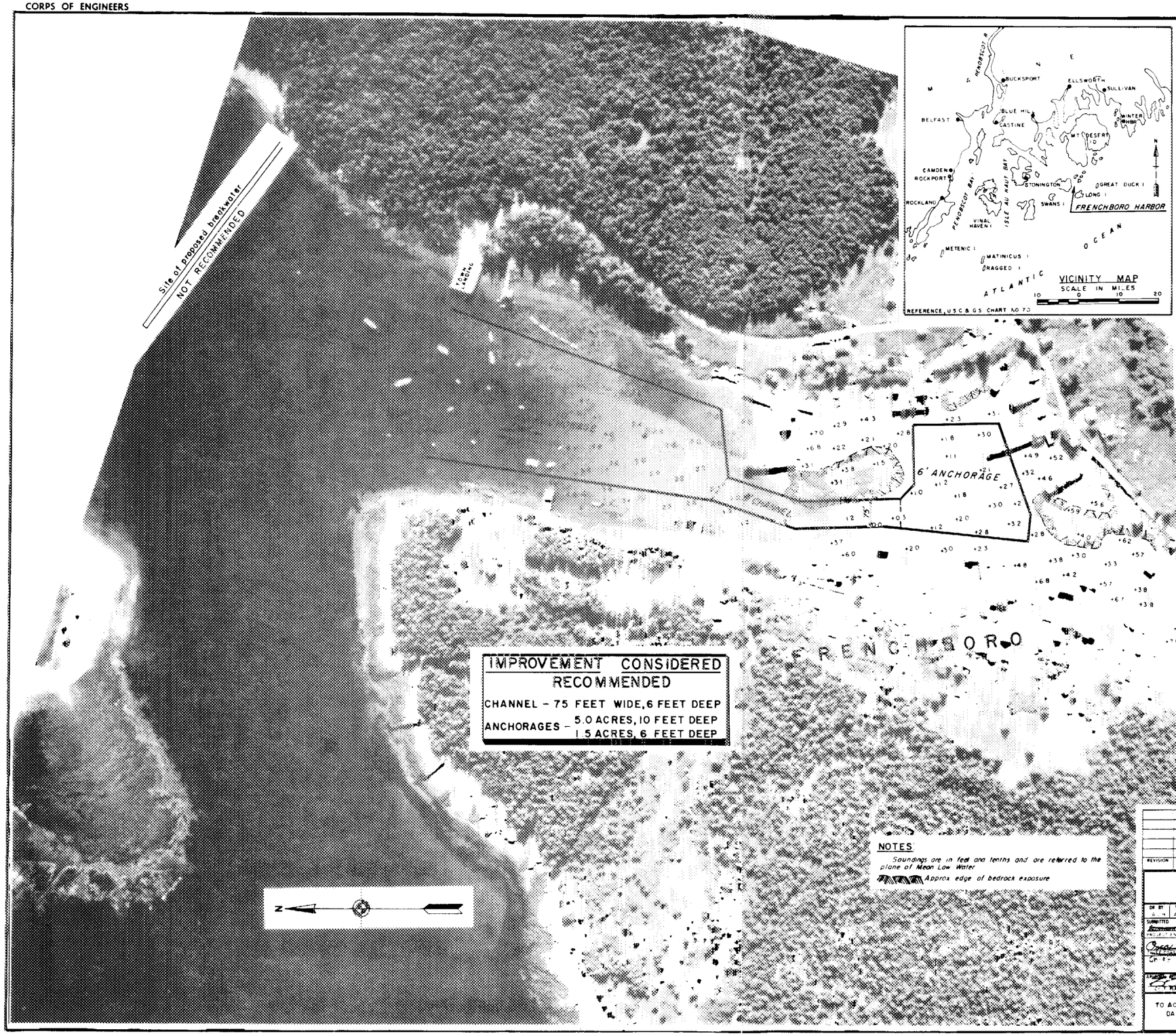
5 Incl
1. Maps - Plates 1 and 2
2. App. A - Comments Fed. Agencies
3. App. B - U. S. Coast Guard
4. App. C - Letters of Comment
5. Info. - Senate Resolution 148

CORPS OF ENGINEERS

U. S. ARMY

Site of proposed breakwater NOT RECOMMENDED





REVISION	DATE	DESCRIPTION	BY

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION
CORPS OF ENGINEERS
WALTHAM, MASS.

DR BY	TR BY	CK BY
A. H.	A. H.	

SUBMITTED
PROJECT ENGINEER

FRENCHBORO HARBOR, ME.
GENERAL MAP

SCALE IN FEET
100 0 100 200

APPROVED
CHIEF, ENGINEERING DIVISION

DATE SEPT 1966

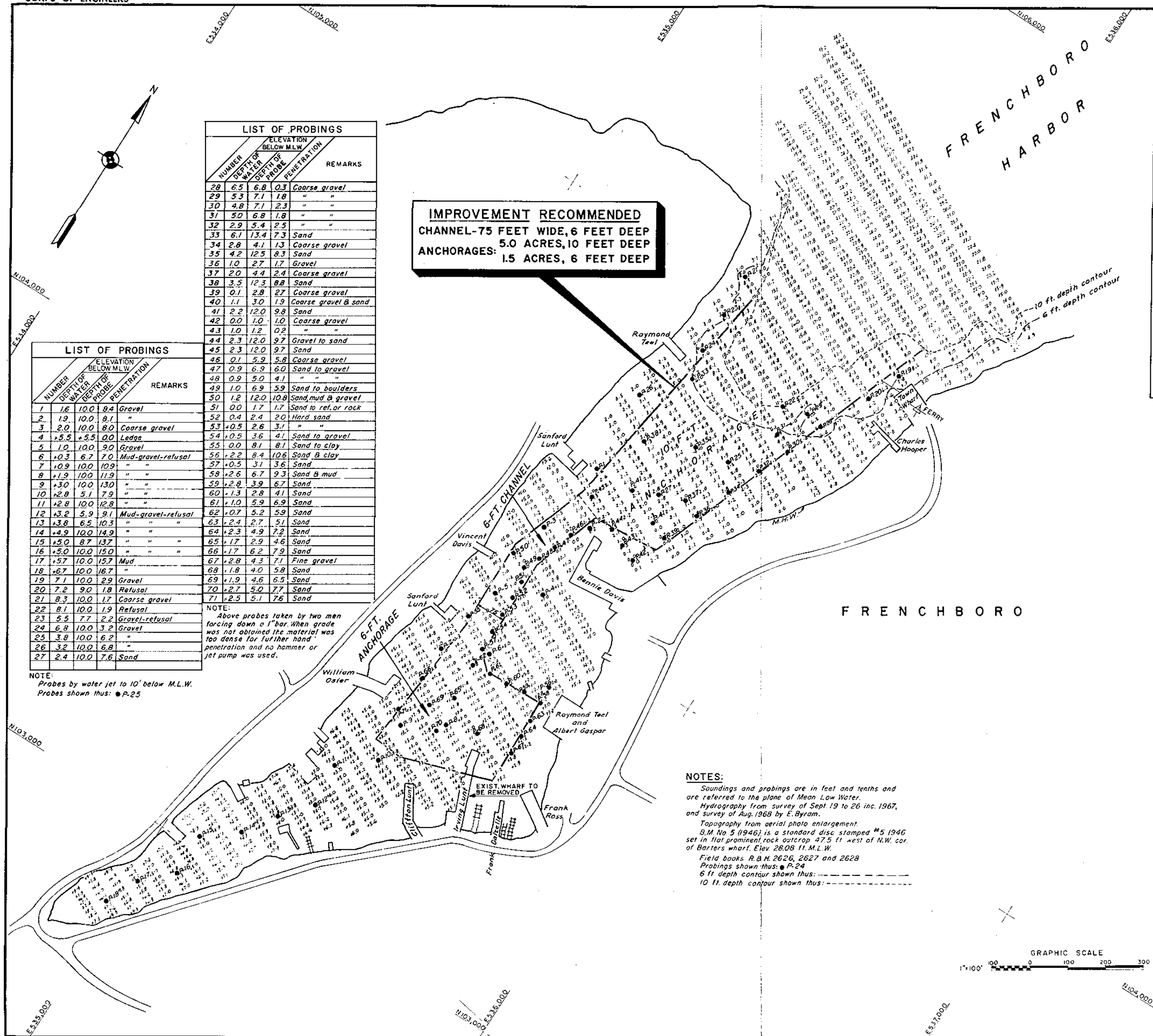
TO ACCOMPANY ~~SURVEY REPORT~~ MEMO
DATED ~~SEPTEMBER 1966~~ MAY 1974

SCALE AS SHOWN

DRAWING NUMBER
31 D-3-4

SHEET OF

PLATE NO. 1



IMPROVEMENT RECOMMENDED

CHANNEL-75 FEET WIDE, 6 FEET DEEP

ANCHORAGES: 5.0 ACRES, 10 FEET DEEP; 1.5 ACRES, 6 FEET DEEP

LIST OF PROBINGS

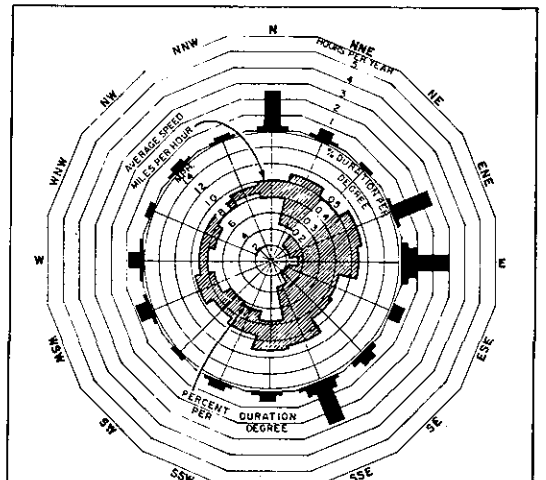
NUMBER	DEPTH OF WATER (ELEVATION BELOW M.L.W.)	DEPTH OF PROBE (ELEVATION BELOW M.L.W.)	PENETRATION	REMARKS
1	1.6	10.0	8.4	Gravel
2	1.9	10.0	8.1	"
3	2.0	10.0	8.0	Coarse gravel
4	+5.5	+5.5	0.0	Ledge
5	1.0	10.0	9.0	Gravel
6	+0.3	6.7	7.0	Mud-gravel-refusal
7	+0.9	10.0	10.9	" "
8	+1.9	10.0	11.9	" "
9	+3.0	10.0	13.0	" "
10	+2.8	5.1	7.9	" "
11	+2.8	10.0	12.8	" "
12	+3.2	5.9	9.1	Mud-gravel-refusal
13	+3.8	6.5	10.3	" " "
14	+4.9	10.0	14.9	" "
15	+5.0	8.7	13.7	" " "
16	+5.0	10.0	15.0	" " "
17	+5.7	10.0	15.7	Mud
18	+6.7	10.0	16.7	"
19	7.1	10.0	2.9	Gravel
20	7.2	9.0	1.8	Refusal
21	8.3	10.0	1.7	Coarse gravel
22	8.1	10.0	1.9	Refusal
23	5.5	7.7	2.2	Gravel-refusal
24	6.8	10.0	3.2	Gravel
25	3.8	10.0	6.2	"
26	3.2	10.0	6.8	"
27	2.4	10.0	7.6	Sand

NOTE:
Probes by water jet to 10' below M.L.W.
Probes shown thus: ● P-25

LIST OF PROBINGS

NUMBER	DEPTH OF WATER (ELEVATION BELOW M.L.W.)	DEPTH OF PROBE (ELEVATION BELOW M.L.W.)	PENETRATION	REMARKS
28	6.5	6.8	0.3	Coarse gravel
29	5.3	7.1	1.8	" "
30	4.8	7.1	2.3	" "
31	5.0	6.8	1.8	" "
32	2.9	5.4	2.5	" "
33	6.1	13.4	7.3	Sand
34	2.8	4.1	1.3	Coarse gravel
35	4.2	12.5	8.3	Sand
36	1.0	2.7	1.7	Gravel
37	2.0	4.4	2.4	Coarse gravel
38	3.5	12.3	8.8	Sand
39	0.1	2.8	2.7	Coarse gravel
40	1.1	3.0	1.9	Coarse gravel & sand
41	2.2	12.0	9.8	Sand
42	0.0	1.0	1.0	Coarse gravel
43	1.0	1.2	0.2	" "
44	2.3	12.0	9.7	Gravel to sand
45	2.3	12.0	9.7	Sand
46	0.1	5.9	5.8	Coarse gravel
47	0.9	6.9	6.0	Sand to gravel
48	0.9	5.0	4.1	" " "
49	1.0	6.9	5.9	Sand to boulders
50	1.2	12.0	10.8	Sand, mud & gravel
51	0.0	1.7	1.7	Sand to ref. or rock
52	0.4	2.4	2.0	Hard sand
53	+0.5	2.6	3.1	" "
54	+0.5	3.6	4.1	Sand to gravel
55	0.0	8.1	8.1	Sand to clay
56	+2.2	8.4	10.6	Sand & clay
57	+0.5	3.1	3.6	Sand
58	+2.6	6.7	9.3	Sand & mud
59	+2.8	3.9	6.7	Sand
60	+1.3	2.8	4.1	Sand
61	+1.0	5.9	6.9	Sand
62	+0.7	5.2	5.9	Sand
63	+2.4	2.7	5.1	Sand
64	+2.3	4.9	7.2	Sand
65	+1.7	2.9	4.6	Sand
66	+1.7	6.2	7.9	Sand
67	+2.8	4.3	7.1	Fine gravel
68	+1.8	4.0	5.8	Sand
69	+1.9	4.6	6.5	Sand
70	+2.7	5.0	7.7	Sand
71	+2.5	5.1	7.6	Sand

NOTE:
Above probes taken by two men forcing down a 1" bar. When grade was not obtained the material was too dense for further hand penetration and no hammer or jet pump was used.



WIND DIAGRAM
PORTLAND, MAINE
OCTOBER 1949 – SEPTEMBER 1964

32 TO 38 M.P.H.
39 - 46 M.P.H.
47 OVER M.P.H.

NOTES:

Soundings and probings are in feet and tenths and are referred to the plane of Mean Low Water.

Hydrography from survey of Sept. 19 to 26 inc. 1967, and survey of Aug. 1968 by E. Byram.

Topography from aerial photo enlargement.

B.M. No. 5 (1946) is a standard disc stamped #5 1946 set in flat prominent rock outcrop 47.5 ft west of N.W. cor. of Barters wharf. Elev. 28.08 ft. M.L.W.

Field books R.B.H. 2626, 2627 and 2628
Probings shown thus: ● P-24
6 ft depth contour shown thus: — — — — —
10 ft. depth contour shown thus: - - - - - - - -

GRAPHIC SCALE
1"=100' 100 0 100 200 300

REVISION	DATE	DESCRIPTION	BY

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION
CORPS OF ENGINEERS
WALTHAM, MASS

DR. BY ADC | TR. BY ADC | CK. BY

SUBMITTED: [signature] PROJECT ENGINEER

[signature] CHIEF, COASTAL ... SECT.

FRENCHBORO HARBOR, ME.
REPORT SURVEY

APPROVAL RECOMMENDED: [signature] CHIEF, PLANNING BRANCH

APPROVED: [signature] CHIEF, ENGINEERING DIVISION

DATE SEPT. 1968

SCALE 1:1200

TO ACCOMPANY SURVEY REPORT DATED: SEPTEMBER 27, 1968

DRAWING NUMBER 1831 D-3-4

SHEET 2 OF 2

PLATE NO. 2

APPENDIX A

U. S. DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
U. S. Postoffice and Courthouse
Boston, Massachusetts 02109

July 26, 1968

Division Engineer
New England Division
U. S. Army Corps of Engineers
424 Trapelo Road
Waltham, Massachusetts

Dear Sir:

This is our conservation and development report on the navigation improvement project for Frenchboro Harbor (Hancock County), Maine, which you are presently studying under authority of a Resolution adopted by the Senate Public Works Committee on January 17, 1963. This report was prepared under authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661-666 inc.), in cooperation with the Maine Department of Sea and Shore Fisheries and has its concurrence as indicated by letter dated July 22, 1968.

We understand that the plan of improvement will consist of a 5-acre anchorage ten feet deep in the outer harbor and a channel 75 feet wide and six feet deep from the outer harbor into a 1.5 acre anchorage and turning basin, also six feet deep.

Frenchboro Harbor, located on the northwest portion of Long Island, is a narrow cove bounded mostly by ledges. The inner portion of the harbor is shoal offering very limited anchorage. At low water the harbor is almost non-existent. To avoid running aground, boats must anchor outside the harbor proper in an area exposed to wind and waves.

Frenchboro Harbor is an active commercial fishing port. At present, there are three major types of fishing being carried on: lobstering, herring seining, and long-line fishing for hake. The shallow water conditions create major navigation problems in the harbor.

Landing the lobster catch during low water periods is a major problem. This, coupled with dangerous docking conditions during foul weather, accounts for much of the lobster harvest being diverted to other ports. To avoid running aground, boats must be moored in an area exposed to stormy weather. Lobstermen report that they have had frequent losses of traps that could not be brought into the harbor for protection during stormy weather. Many boats have suffered extensive damages to hull and gear during foul weather because of overcrowding in this anchorage. Lobster-holding cars may also be subjected to damage or loss during stormy weather.

With the arrival of as many as 17 mainland herring carrier vessels, overcrowding in the harbor reaches the critical point and adds to the difficulties of handling the transfer of fish. Tidal delays are inherent at this harbor, thus limiting the available time the herring fishermen have to make their catches. As many as ten seiners, operating a total of 36 boats of various sizes, operate in the area during the peak of the fishing season. The estimated average annual herring catch under without-the-project conditions in the Frenchboro Harbor area over the 50-year period of analysis is four million pounds.

An important fishery for hake takes place in the vicinity of Frenchboro. The fish are taken by long line during a period of about four months each year. About seven vessels operate out of Frenchboro Harbor and land their catch at mainland ports. As is the case with the herring fishery navigation problems associated with low-water conditions and tidal delays also limit the catches of hake. Hake catches under without-the-project conditions will average about two and a half million pounds annually.

A total of 22 lobster boats are based at this harbor. The latest figures on lobster landings indicate that about 8,000 pounds of lobsters per boat or a total of 180,000 pounds valued at $144,000 are caught by lobster boats based at Frenchboro Harbor. Of this total, however, about 140,000 pounds are landed at Frenchboro. The remaining 40,000 pounds are landed elsewhere, primarily at McKinley on the mainland due to the present lack of facilities and unprotected conditions existing at Frenchboro Harbor. The average annual lobster catch is expected to remain at about the same level over the period of analysis, that is, 180,000 pounds.

With improvement of the harbor, it is expected that the 40,000 pounds of lobster now landed elsewhere will be brought into Frenchboro Harbor. Additional mooring space within a protected anchorage will permit four lobstermen, not now fishing out of Frenchboro, to return, thus adding their average catch of about 32,000 pounds to the total of local landings.

It is expected that with elimination of tidal delays and improved navigation conditions, the lobster landings will increase by ten percent, representing 21,200 pounds, at $0.80 per pound, valued at $17,000. This increase of $17,000 represents the average annual project benefit accruing to the lobster industry.

Harbor improvement will increase the annual herring catch in the area because of greater fishing efficiency. It will allow better attendance of seines on a regular basis. These seines are usually set in large coves on the seaward side of the island. The improved anchorage will provide additional space to set seines. There will be reduction in tidal delays by herring carrier vessels picking up fish for delivery to the mainland. This will represent an average annual benefit of 250,000 pounds of herring valued at $5,000 at landing.

The hake fishery also will be benefited by the project. Improved navigation conditions and elimination of tidal delays will allow the existing fleet approximately 30 additional days of fishing per year. This will represent an additional catch of 840,000 pounds with an average annual value of $84,000.

In summary, the following annual commercial fishery benefits will accrue to the harbor improvements at Frenchboro Harbor, Maine:

Increased lobster landings at Frenchboro Harbor: 21,200 pounds valued at $17,000

Increased herring catch: 250,000 pounds valued at $5,000

Increased hake catch: 840,000 pounds valued at $84,000

Thus, the total average annual commercial fishery benefits will be $106,000 at landing.

Harbor dredging will cause no damage to the fish and wildlife resources nor will spoiling disposal if confined to upland areas (above mean high water) or placed on an approved offshore location. It appears that the placement of dredged material in an area northwest of Frenchboro Harbor will not significantly affect fishery resources. This is an area with mud bottom with depths from 100 to 114 feet located about one mile from Frenchboro Harbor and about one-half mile south of the cable line from Swans Island to Frenchboro.

This Service, in cooperation with the Maine Department of Sea and Shore Fisheries, will cooperate with your agency in the selection of an offshore spoiling location during the advance planning stage.

We plan no further studies on the plan of improvement unless the plan currently considered is altered. Should there be changes in the plan, please advise us and we will determine whether additional fish and wildlife studies are needed.

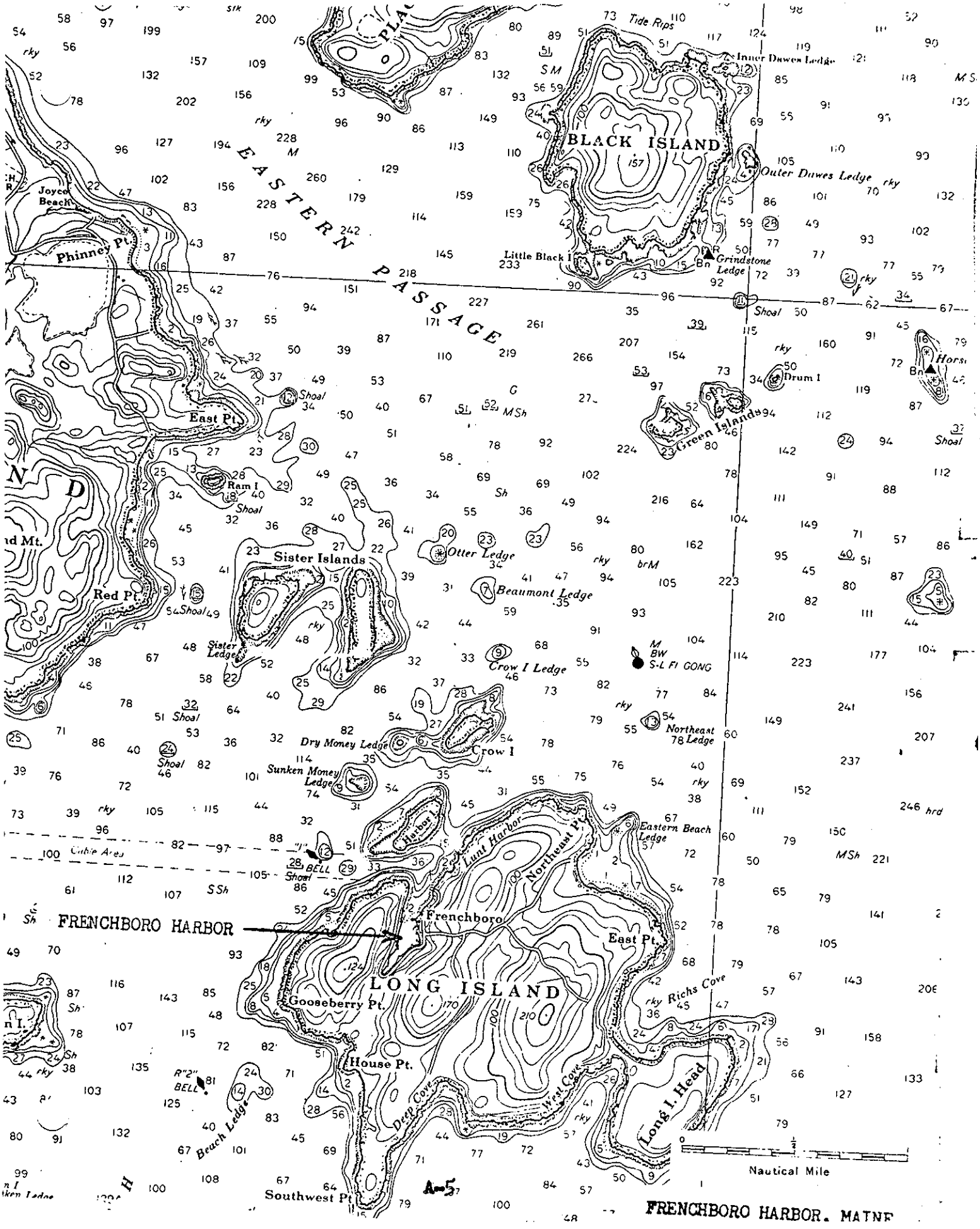
Sincerely yours,

Richard E. Griffith

Regional Director
Bureau of Sport Fisheries & Wildlife

John T. Gharrett

Regional Director
Bureau of Commercial Fisheries


EASTERN PASSAGE
BLACK ISLAND
Tide Rips
Inner Dawes Ledge
Outer Dawes Ledge
Joyce Beach
Phinney Pt.
Little Black I
Bn
Grindstone Ledge
Shoal
Drum I
Green Islands
East Pt.
Shoal
Ram I
Shoal
Sister Islands
Otter Ledge
Beaumont Ledge
Red Pt.
Shoal
Sister Ledge
Crow I Ledge
M
BW
S-L Fl GONG
Dry Money Ledge
Crow I
Northeast Ledge
Sunken Money Ledge
Shoal
Cable Area
BELL
Harbor Ledge
Lunt Harbor
Northeast Pt.
Eastern Beach Ledge
FRENCHBORO HARBOR
Frenchboro
East Pt.
LONG ISLAND
Gooseberry Pt.
Richs Cove
House Pt.
Deep Cove
West Cove
Long I. Head
Beach Ledge
Southwest Pt
Nautical Mile
A-5
FRENCHBORO HARBOR, MAINE

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SECRETARY
NORTHEAST REGION
JOHN F. KENNEDY FEDERAL BUILDING
ROOM 2003 J & K
BOSTON, MASSACHUSETTS 02203

September 23, 1968

Mr. John Wm. Leslie
Chief, Engineering Division
New England Division, Corps of Engineers
U.S. Department of the Army
424 Trapelo Road
Waltham, Massachusetts 02154

Dear Mr. Leslie:

Reference is made to your letter dated 26 March 1968. The opportunity to comment on the proposed navigation improvement project at Frenchboro Harbor, Long Island Plantation, Maine is appreciated.

We are pleased to note that in the interest of pollution prevention and control local interests will be required to establish regulations prohibiting the discharge of untreated sewage, garbage and other pollutants in the waters of the harbor.

The project involves dredging, and disposal of excavated material in an offshore dumping ground. It is recommended that prior to construction, the method of disposal be coordinated with the Maine Water & Air Environmental Improvement Commission; and that prospective contractors be informed that their operations must be compatible with the existing state standards of water quality.

Sincerely yours,

Mark Abelson

Mark Abelson
Regional Coordinator

cc: Maine Water & Air Environmental
Improvement Commission
James Lambie, FWPCA, Needham, Mass.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
REGIONAL OFFICE
Region I
John Fitzgerald Kennedy Federal Building
Boston, Massachusetts 02203

PUBLIC HEALTH SERVICE

October 30, 1968

Mr. John Wm. Leslie
Chief, Engineering Division
Department of the Army, NED
Corps of Engineers, 424 Trapelo Road
Waltham, Massachusetts 02154

Dear Mr. Leslie:

This will refer to your letter of 18 October 1968 to Dr. Ross and to my conversation of this morning with Mr. Guptill of your office. As expressed to Mr. Guptill, a review of the proposed navigation improvement project at Frenchboro Harbor, Maine, was made. It was determined that the area where the work will be done does not involve shellfish growing areas and, therefore, the proposed project would not endanger the Maine shellfish growing industry. The disposal of dredging material should be in such manner that shellfish growing areas along Mount Desert Island and along the shore of the mainland are not involved.

It is noted from your letter that there are no recreational craft at the present time based within the improvement project area. It is, therefore, not convenient to project what benefit the proposed work might have upon recreation, however, any anchorage improvement might at some future time be useful for recreational purposes.

In summary, a review of the proposed deepening of the inner harbor at Frenchboro Harbor, Long Island Plantation, Maine, indicates that there would be no adverse affects on health and a possibility of some long ranged benefits to recreation which is, of course, a major health measure.

Sincerely yours,

Floyd B. Taylor

Floyd B. Taylor
Regional Program Chief
Water Supply & Sea Resources Program
ECA, Consumer Protection & Environmental
Health Service

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

Address reply to:
COMMANDER (o-1)
First Coast Guard District
J. F. Kennedy Federal Bldg.
Government Center
Boston, Mass. 02203
TEL: 617-223-3634

APPENDIX B

3260
28 MAR 1968

From: Commander, First Coast Guard District
To: Division Engineer, U. S. Army Corps of Engineers
New England Division

Subj: Frenchboro Harbor, Long Island Plantation, Maine

Ref: (a) NEDED-R ltr of 21 March 1968

1. Reference (a) with enclosure (1) has been reviewed and it appears at this time that no navigational aids will be required.

H. A. CAMPBELL, JR.
By direction

Encl: (1) Map of Frenchboro Harbor, Maine, Drawing No. 1831 D-3-4.

OFFICE OF SELECTMEN, ASSESSORS AND
OVERSEERS OF POOR
MUNICIPALITY OF

APPENDIX C

July 29 19 68

Colonel Remi O. Renier
Division Engineer
New England Division, Corps of Engineers
Department of the Army
424 Trapelo Road
Waltham, Massachusetts 02154

Dear Colonel Renier:

As a result of a request by the people of Frenchboro, a resolution was adopted on 17 January 1963 by the U. S. Senate Committee of Public Works which authorized the Corps of Engineers to review a previous survey report on Frenchboro Harbor, Long Island Plantation, Maine to determine the need and justification for navigation improvements on the harbor.

A meeting was held in Bernard, Maine, on 24 July 1968 with an engineer from your office to review the plan of improvement and the attendant requirements of local cooperation which were developed from the study. The plan reviewed would provide a 5*acre anchorage 10 feet deep in the outer harbor and a channel 75 feet wide, 6 feet deep, leading into a 1.5-acre anchorage 6 feet deep in the inner harbor.

It is understood that the entire first cost of construction of the project, now estimated to be $510,000, will be borne by the Federal Government since the improvement would benefit the commercial fishing industry. The Town of Frenchboro will be required to provide and maintain a public landing within the harbor open to all on equal terms, with berths and access channels to the landing and other private wharves commensurate in depth to the adjacent Federal anchorages.

We consider that the proposed plan of improvement will meet the needs of commercial navigation and that the Town of Frenchboro will be willing and able to meet the requirements of local cooperation when needed.

It is hoped that this letter, together with that of the Maine State Port Authority, will enable you to complete the survey report for the Federal navigation improvement needed at Frenchboro Harbor.

Sincerely yours,

David L. Lunt
Charles Hooper
Arthur C. Gay

Selectmen of Long Island Plantation
Frenchboro, Maine

RONALD W. GREEN, COMMISSIONER

STATE OF MAINE

DEPARTMENT OF SEA AND SHORE FISHERIES
STATE HOUSE
AUGUSTA, MAINE 04330

September 20, 1968

Re: NEDED-R

F. R. Day
Colonel, Corps of Engineers
Acting Division Engineer
Department of the Army
N. E. Division, Corps of Engineers
424 Trapelo Road
Waltham, Massachusetts 02154

Dear Colonel Day:

This is to acknowledge your letter of 13 September 1968 regarding the Corps of Engineers' study of a navigation improvement project in Frenchboro Harbor, Long Island Plantation.

Please be advised that we at the State level are pleased to learn that your report is favorable to the proposed improvement.

We believe this project will be most beneficial to the Frenchboro area and to Maine's commercial fisheries.

It is our understanding that this improvement will meet the needs of navigation in the harbor and that local interests are prepared to meet the requirements of local cooperation.

It is hoped that your report can be completed in the near future and that the necessary funds may be obtained so that work can get underway on this project as soon as possible.

Sincerely,

Ronald W. Green
Commissioner

MAINE PORT AUTHORITY

MAINE STATE PIER • PORTLAND, MAINE 04111 • TEL. 773-5608

EDWARD LANGLOIS, JR.
GENERAL MANAGER

September 25, 1968

Colonel F. R. Day
Acting Division Engineer
U. S. Army Corps of Engineers
424 Trapleo Road
Waltham, Mass.

Dear Colonel Day:

This will acknowledge your letter of September 13, 1968 advising us of the favorable report on navigation improvements in Frenchboro, Long Island Plantation.

We have reviewed your letter and the requirements of local interests. We have discussed this project with the Department of Sea and Shore Fisheries and feel this is a worthy project in the best interest of the State of Maine and Long Island Plantation. We support this project and are prepared to work with the Corps of Engineers in providing the necessary State commitments as required.

Sincerely yours,

MAINE PORT AUTHORITY

Edward Langlois (EL)

Edward Langlois
General Manager

EL/pl

cc: Ronald Green
Bennie Davis

FRENCHBORO HARBOR, LONG ISLAND PLANTATION, MAINE

Information called for by Senate Resolution 148, 85th Congress, adopted 28 January 1958.

1. Navigation Problem.

Frenchboro Harbor is a small cove located on the northwest side of Long Island, the most southerly island of a large group of islands in Jericho Bay. It lies 7 miles south of Mount Desert Island and 40 miles south of Ellsworth, Maine. There is no existing Federal navigation project in Frenchboro.

2. The principal navigation problem evolves from inadequate anchorage space for the local and transient fishing fleets within the harbor. Shoaling has reduced the natural harbor area to such an extent that all craft must be moored at the entrance to the outer harbor, resulting in considerable boat damage and tidal delays in fishing operation.

3. Improvement Considered.

Consideration was given to a plan of improvement proposed by local interests which consists of enlarging and deepening the existing anchorages in the harbor to provide for a depth of 10 feet below mean low water in the outer harbor and to a depth of 8 feet in the inner harbor. A detailed hydrographic survey and probings taken in Frenchboro Harbor indicate that considerable ledge rock would be encountered in developing the desired improvement. Removal of this material would result in a project that would not be economically justified. Dredging of either the outer or inner anchorage independently would not provide enough mooring space to meet the needs of the locally-based fishing fleet. Due to the long and narrow shape of the harbor, with ledge outcrops located between the outer and inner harbor, any anchorage or turning basin in the inner harbor would be limited to a one-acre area located in the center of the inner harbor.

Fishing boats that use the inner harbor draw a maximum of 4 feet of water. Deeper draft herring carriers, the State ferry and a coastwise oil tanker use the outer harbor where a 10-foot depth would provide the optimum depth needed.

4. Improvement Recommended.

A plan of improvement has been developed which would provide for a 5.0-acre anchorage 10 feet deep in the outer harbor and a channel 75 feet wide, 6 feet deep, leading into a 1.5-acre anchorage of the same depth in the inner harbor. The estimated cost of the project is $560,000. Total annual costs for the improvement would amount to $28,000.

5. Benefits are based on commercial fishing, both existing and prospective. No use is expected to be made of the harbor by recreational craft due to its remote location relative to centers of recreational activity. Annual benefits are estimated to total $57,400. The benefit-cost ratio is 2.0 to 1.0.

6. Apportionment of Cost and Local Cooperation.

As the benefits to be realized are entirely general in nature, local interests should not be required to share in the first cost of construction. The improvement is recommended subject to the requirements that local interests:

a. Provide, maintain and operate a public landing, open to all on equal terms, with berthing depth alongside commensurate to the anchorage, including an adequate access road to the landing, parking area and suitable related facilities.

b. Provide and maintain without cost to the United States depths in berthing areas and local access channels serving private wharves commensurate with the depths provided in the related project area.

c. Remove without cost to the United States a sufficient portion of the privately-owned pier extending into the proposed 6-foot anchorage.

d. Hold and save the United States free from all damages that may result from the construction and maintenance of the project.

e. Provide without cost to the United States all lands, easements and rights-of-way required for construction and subsequent maintenance of the project and for aids to navigation upon the request of the Chief of Engineers to be required in the general public interest for subsequent disposal of spoil, and also necessary retaining dikes, bulkheads and embankments therefor or the costs of such retaining works.

f. Regulate the use, growth and free development of the harbor facilities with the understanding that they will be open to all on equal terms.

g. Establish regulations prohibiting discharge of untreated sewage, garbage and other pollutants in the waters of Frenchboro Harbor by users thereof, which regulations shall be in accordance with applicable laws or regulations of Federal, State and local authorities responsible for pollution prevention and control.

7. Discussion.

Local interests have been consulted and have approved the recommended plan. They have indicated also that the requirements of local cooperation will be fulfilled. Proposed local cooperation is consistent with similar projects. The project is economically justified based on data in the report and criteria for similar projects.